

WHAT IS CLAIMED IS:

1. A frame synchronization method comprising:  
composing data and a synchronous word to generate a frame;  
transmitting the generated frame from a transmitter to a receiver via a transmission line,  
wherein said composing the data and the synchronous word arranges the synchronous word based on noise cycle of the transmission line.
2. A frame synchronization method as recited in claim 1, wherein the synchronous word is arranged according to predetermined arrangement algorithm.
3. A frame synchronization method as recited in claim 2, wherein a parameter of the predetermined arrangement algorithm comprises at least one of length of the synchronous word and an arrangement interval of the synchronous word.
4. A frame synchronization method as recited in claim 1, wherein the length of the synchronous word is almost equal to the length of a multiple of the noise cycle by a natural number.
5. A frame synchronization method comprising:  
composing data and a plurality of synchronous words to generate a frame;  
transmitting the generated frame from a transmitter to a receiver via a transmission line,  
wherein said composing the data and the plurality of synchronous words arranges the plurality of synchronous words based on noise cycle of the transmission line.
6. A frame synchronization method as recited in claim 5, wherein said composing the data and the synchronous words arranges the plurality of synchronous words over a section as long as the noise cycle.
7. A frame synchronization method as recited in claim 5, wherein the length of an arrangement interval of at least one pair of the plurality of synchronous words is

different from the length of the noise cycle.

8. A frame synchronization method as recited in claim 5, wherein at least one pair of the plurality of synchronous words are arranged using the same pattern.

9. A frame synchronization method as recited in claim 1, wherein the length of the noise cycle is the length of a time interval whose noise level in the transmission line is beyond a predetermined threshold.